

30.015-44942

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DISTRICT II-ARTESIA O.C.D.

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date: 10/7/2018

Job End Date: 10/23/2018

State: New Mexico

County: Eddy

API Number: 30-015-44942-00-00

Operator Name: Devon Energy Production Company L.
P.

Well Name and Number: Tomb Raider 1-12 Fed Com 714H

Latitude: 32.34005770

Longitude: -103.73061160

Datum: NAD27

Federal Well: YES

Indian Well: NO

True Vertical Depth: 11,980

Total Base Water Volume (gal): 18,339,972

Total Base Non Water Volume: 0

**Hydraulic Fracturing Fluid Composition:**

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Company 1	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	85.84034	None
Other Chemical (s)	Listed Above	See Trade Name (s) List					
			Water	7732-18-5	93.00000	0.12425	

BioSuite GQ 12-3	BioSuite	Biocide					
				Listed Below			
Surf-Flo 420	Innospec Oilfield Services	Flowback Surfactant					
				Listed Below			
Sand	Company 1	Proppant					
				Listed Below			
Hydrochloric Acid (15%)	Company 2	Acidizing					
				Listed Below			
HiRate HV 655	Innospec Oilfield Services	Friction Reducer					
				Listed Below			

Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.

			CRYSTALLINE SILICA	14808-60-7	100.00000	13.97964	
			Ethoxylated Alcohol	Proprietary	20.00000	0.01651	
			Distillates (petroleum), hydrotreated light	64742-47-8	30.00000	0.01312	
			Hydrochloric Acid	7647-01-0	15.00000	0.00467	
			Dipentene	68956-56-9	5.00000	0.00412	
			Methanol	67-56-1	5.00000	0.00412	
			Glutaraldehyde	111-30-8	15.00000	0.00339	
			Alcohols, C12-16, ethoxylated	68551-12-2	5.00000	0.00218	
			N,N-bis(2-hydroxyethyl) oleamide	93-83-4	5.00000	0.00218	
			Didecyldimethyl ammonium chloride	7173-51-5	5.00000	0.00113	

			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00113	
			Ethylene oxide/Propylene oxide copolymer	9003-11-6	0.50000	0.00041	

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)